

each frame comprising, in sequence:

two control bytes;

10 a plurality of sequential sets of data bytes, each set of data bytes comprising a sequence of at least one audio byte and a plurality of video bytes, at least one of said plurality of video bytes between each sequential audio byte, each set of data bytes having its audio and video bytes in the same order as each other set of data bytes; and

a plurality of error correction bytes.

REMARKS

Claims 1-30 are pending in the present application. Claims 1-28 are rejected, and claims 29-30 are objected to. Claim 1 is amended hereby.

5 Responsive to the request by the Examiner to resubmit the supplemental Information Disclosure Statement (form PTO-1449) and copies of the references cited therein that were originally submitted in response to the last Office Action (i.e., paper No. 4), Applicant has submitted herewith copies of the previously-submitted form PTO-1449 and the references cited therein.

10 Responsive to the request by the Examiner to resubmit the proposed drawing changes that were submitted in response to the last Office Action, Applicant has submitted herewith a proposed Request for Drawing Change. More particularly, Figs. 1, 2 and 3C have been revised to label the diagrammatic blocks 30 and 40 of Fig. 1, blocks 14, 16, 18, 120 and 200 of Fig. 2, and block 120 of Fig. 3C so as to indicate the contents and/or function thereof, as requested by

the Examiner. Upon entry of the Proposed Request for Drawing Change and allowance of the application, Applicant will submit formal drawings.

Responsive to the objection to the Abstract on the basis of an informality, Applicant has submitted herewith a new Abstract on a separate sheet as required in the previous Office Action (i.e., paper No. 4). Applicant apologizes for any inconvenience this may have caused the Examiner.

Responsive to the rejection of claims 1-6, and 9-18 under 35 USC §103(a) as being unpatentable over U.S. Patent No. 5,389,965 (Kuzma) in view of U.S. Patent No. 5,825,408 (Yuyama, et al.) and further in view of U.S. Patent No. 5,119,375 (Paneth, et al.), Applicant has amended claim 1 and submits that claim 1, and claims 2-6 and 9-18 depending therefrom, are now in condition for allowance.

Kuzma discloses a video telephone station 10 (Fig. 1) having an audio codec 185 (Fig. 2) and a video codec 500. Data communication between video telephone stations 10 occurs via bidirectional digital data signals transmitted between modems associated with each video telephone 10. The video telephones 10 use a communications protocol known as X.25, which was originally approved as a protocol standard in 1976 (column 5, line 44 through column 6, line 10). An X.25 data packet comprises either audio, video or supervisory data (column 7, lines 10-15).

Yuyama, et al., discloses a frame of multiplexed code (not referenced, Fig. 19). The frame is composed of nearly 256 bytes of video data consisting of a video header and a video codec, and nearly 256 bytes of an audio header and an audio code. A video code and an audio code contain an error correction code each. A video header and an audio header are placed ahead

of a video code and an audio code, respectively. (column 23, lines 10-21).

Paneth, et al., disclose a subscriber RF telephone system (Fig. 2) and teaches conventional RF transmission of video data to and from stations (column 1, lines 29-39) and the synchronization of frames to the data rate of the RF link (column 10, lines 36-41).

5 In contrast, claim 1 as amended recites in part “a plurality of sequential sets of data bytes, each set of data bytes comprising a sequence of at least one audio byte and a plurality of video bytes, at least one of said plurality of video bytes between each sequential audio byte”. (Emphasis Added). Applicant respectfully submits that such a limitation is neither taught, disclosed, nor suggested by the cited references, alone or in combination.

10 As the Examiner acknowledges, Kuzma does not disclose a frame that includes a sequence of at least one audio byte and a plurality of video bytes, with each set of data bytes having at least one video byte between sequential audio bytes.

Yuyama, et al., discloses a frame that consists of a separate and distinct video code followed by a separate and distinct audio code. The individual video and audio bytes are
15 contained within the separate video and audio codes, respectively. The video bytes and audio bytes are completely segregated from each other, i.e., they are not intermingled within a frame. Rather, they are organized into separate, non-contiguous areas of the frame. No video byte is disposed between sequential audio bytes. Thus, Yuyama, et al., fails to disclose or suggest a plurality of sequential sets of data bytes having a sequence of at least one audio byte and a
20 plurality of video bytes, with at least one video byte between each sequential audio byte, as recited in part by amended claim 1.

For the foregoing reasons, Applicant respectfully submits that amended claim 1, and

claims 2-6, and 9-18 depending therefrom, are in condition for allowance, which is hereby respectfully requested.

Further responsive to the rejection of claims 1-6, and 9-18 under 35 USC §103(a) as being unpatentable over Kuzma in view of Yuyama, et al., and further in view of Paneth, et al.,
5 Applicant respectfully submits that an improper standard of obviousness has been applied.

The Examiner states one of ordinary skill in the art, having the Kuzma, Yuyama, et al., and Paneth, et al., references and a general knowledge of framing bits, would have had no difficulty in providing the audio and video bytes within the frame as claimed in amended claim 1 of the present specification, and that therefore the present invention is obvious. (Emphasis
10 Added).

The possibility that one of ordinary skill in the art may have the capability to arrive at an invention is not the test for whether one of ordinary skill in the art would have arrived at the invention based on the teaching of the prior art. "At best, the Examiner's comments regarding obviousness amount to an assertion that one of ordinary skill in the relevant art *would have had*
15 *no difficulty* arriving at [Applicant's] invention. This is an inappropriate standard for obviousness." *Ex parte Levengood*, 28 USPQ 2d 1300, 1301-02 (Bd. Pat. App. & Inter. 1993)(*emphasis added*). Furthermore, "[t]hat which is within the capabilities of one skilled in the art is not synonymous with obviousness." *Id.* Moreover, "that one can reconstruct . . . an invention . . . does not afford the basis for an obviousness conclusion unless . . . [the prior art]
20 supplies sufficient impetus to have led one of ordinary skill in the art to combine the teachings of the references to make the claimed invention." *Id.*

The cited references, as described above, do not provide any impetus or motivation to

combine the teachings thereof to arrive at Applicant's invention. Therefore, a prima facie case of obviousness has not been established.

For all the foregoing reasons, Applicant respectfully submits that amended claim 1, and claims 2-6, and 9-18 depending therefrom, are in condition for allowance, which is hereby
5 respectfully requested.

Claim 6 recites in part, "synchronizing the frames to the data rate of the rf link".
(Emphasis Added). Applicant submits that such a limitation is neither taught, disclosed nor suggested by the cited references.

Kuzma does not disclose transmission of a frame over an RF link. Thus, Kuzma fails to
10 disclose synchronizing the frames to the data rate of an RF link, as recited in part by claim 6.

Yuyama, et al., discloses that the frames are transmitted via a modem over a telephone line. Thus, Yuyama, et al., fails to disclose synchronizing the frames to the data rate of an RF link, as recited in part by claim 6.

Paneth, et al., discloses an RF telephone system. RF telephone systems are asynchronous
15 systems. Thus, Paneth, et al., fails to disclose synchronizing the frames to the data rate of an RF link, as recited in part by claim 6.

For the foregoing reasons, Applicant respectfully submits that claim 6 is in condition for allowance in its present form, and respectfully request same. In addition to the foregoing reasons, Applicant respectfully points out that claim 6 depends from claim 1, which is in
20 condition for allowance for the reasons given above. Accordingly, claim 6 is also in condition for allowance, which is hereby respectfully requested.

Claims 7 and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S.

Patent No. 5,389,965 (Kuzma) in view of U.S. Patent No. 5,825,408 (Yuyama, et al.) and further in view of U.S. Patent No. 5,119,375 (Paneth, et al.) as applied to claims 1-6 and 9-18, and further in view of U.S. Patent No. 5,583,912 (Schillaci, et al.). Applicant respectfully points out that claims 7 and 8 depend from claim 1, which is in condition for allowance for the reasons
5 given above. Accordingly, claims 7 and 8 are also in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 19-20 and 23-28 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,389,965 (Kuzma) in view of U.S. Patent No. 5,119,375 (Paneth, et al.), and further in view of U.S. Patent No. 5,577,190 (Peters), Applicant respectfully
10 traverses the rejection.

Kuzma discloses a video telephone system including a single processor 160 (Fig. 2), video codec 500 and audio codec 185. Host processor 160 combines audio, video and supervisory data into a serial data stream for transmission over the PSTN via modem 200. Raw data from video codec 500 and audio codec 185 are packetized per the X.25 protocol.
15 Additionally, processor 160 regulates the flow of information using control signals in the reverse direction to make sure that received data has an acceptable error rate, and generates frame check information on transmitted data. In the receiving direction, processor 160 performs the reverse function. (column 7, lines 31-44). A variety of compression techniques are simultaneously used in video codec 500. Audio information is converted into a coded digital output signal for
20 transmission, and decoded into an analog output signal. (column 5, lines 33-42).

Paneth, et al., as discussed above, discloses only an asynchronous RF telephone system, and teaches only the conventional RF transmission/reception of video data to and from stations

(see column 1, lines 29-60).

Peters discloses a compressed data buffer 214 (Fig. 8) interfaced to host computer 216 connected to a disk 218. Data buffer 214 executes a direct memory access process to absorb any speed difference between processor 212 and disk 218, and to permit data transfer between processor 212 and disk 218 with a single pass through a CPU of host computer 216.

In contrast, claim 19 recites in part “a first digital signal processor . . . a second digital signal processor . . . a third digital signal processor” and “means for running multiple compression and decompression algorithms on all three digital signal processors”. (Emphasis Added). Applicants respectfully submit that such structure is neither taught, disclosed nor suggested by the cited references, alone or in combination.

Kuzma discloses a single processor 160 that creates a serial data stream for transmission using the X.25 protocol, and regulates the flow of information to make sure that data has an acceptable error rate. Processor 160 of Kuzma is not disclosed as a digital signal processor (DSP). Further, Kuzma discloses only that audio information is coded into and decoded from digital signals for transmission and reception, respectively. The coding/decoding of audio in Kuzma is not done by multiple algorithms. Kuzma does not does not disclose using multiple compression or decompression algorithms for audio information. Thus, Kuzma fails to disclose a first DSP, a second DSP and a third DSP, nor does Kuzma disclose multiple compression and decompression algorithms on all three digital signal processors, as recited in part by claim 19.

Neither Peters or Paneth, et al., as discussed above, teach, disclose or suggest using multiple DSPs. Nor do Peters or Paneth, et al., as discussed above, teach, disclose or suggest running multiple compression/decompression algorithms on three DSPs. Thus, neither Peters or

Paneth, et al., disclose or suggest a first digital signal processor (DSP), a second DSP, a third DSP and multiple compression and decompression algorithms on all three digital signal processors, as recited in part by claim 19.

Further responsive to the rejection of claims 19-20 and 23-28 under 35 U.S.C. §103(a) as being unpatentable over Kuzma in view of Paneth, et al., and further in view of Peters, Applicant respectfully submits that an improper standard of obviousness has been applied for the same reasons given above in regard to claims 1-6 and 9-18.

More particularly, the Examiner states it would have been obvious to one of ordinary skill in the art, having the Kuzma and Paneth, et al., references and a general knowledge of RF transmission, would have had no difficulty in providing the RF transmission/reception of video data and synchronization of frames, as claimed. (Emphasis Added).

The possibility that one of ordinary skill in the art may have the capability to arrive at an invention is not the test for whether one of ordinary skill in the art would have arrived at the invention based on the teaching of the prior art. "At best, the Examiner's comments regarding obviousness amount to an assertion that one of ordinary skill in the relevant art *would have had no difficulty* arriving at [Applicant's] invention. This is an inappropriate standard for obviousness." *Ex parte Levengood*, 28 USPQ 2d 1300, 1301-02 (Bd. Pat. App. & Inter. 1993)(emphasis added). Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." *In re Mills*, 916 F.2d 680, 682, 16 USPQ2d 1430, 1432 (Fed. Cir. 1990).

The cited references, as described above, do not provide any suggestion or motivation to combine the teachings thereof to arrive at Applicant's invention. Therefore, a prima facie case of

obviousness has not been established.

For the foregoing reasons, Applicant respectfully submits that claim 19, and claims 20 and 23-28, are in condition for allowance, which is hereby respectfully requested.

Claims 21 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,389,965 (Kuzma) in view of U.S. Patent No. 5,119,375 (Paneth, et al.) and further in view of Peters as applied to claims 19-20 and 23-28, and further in view of U.S. Patent No. 5,583,912 (Schillaci, et al.). Applicant respectfully point out that claims 21 and 22 each depend from claim 19, which is in condition for allowance for the reasons given above. Accordingly, claims 21 and 22 are also in condition for allowance, which is hereby respectfully requested.

The Examiner indicated claims 29 and 30 would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims, for which courtesy the Examiner is thanked. Applicant respectfully requests consideration of this Amendment prior to rewriting claims 29 and 30 in independent form to include all of the limitations of base claim 19.

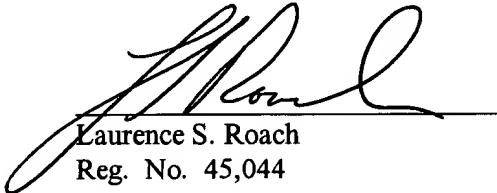
For all the foregoing reasons, Applicants submit that no combination of the cited references teach, disclose or suggest the subject matter of the pending claims. The pending claims are therefore in condition for allowance, and Applicant respectfully requests withdrawal of all rejections, and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally petition therefor and authorize that any charges be made to Deposit Account No. 10-0223,

Jaeckle Fleischmann & Mugel, LLP. Should any questions concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (716) 262-3640.

Respectfully submitted,

Date JUNE 5, 2001


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PATENT
90041.97R074/CSD-55

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	Riffiee)	
)	
Serial No.	:	08/800,574)	Examiner:
)	Lee, R.
Filed	:	February 18, 1997)	
)	Art Unit:
Entitled	:	NARROWBAND VIDEO CODEC)	2613
)	
)	

MARKED-UP COPY OF AMENDMENTS TO THE SPECIFICATION AND CLAIMS

Hon. Assistant Commissioner for Patents
Box: Non-Fee Amendment
Washington, D.C. 20231

Dear Sir:

In compliance with 37 CFR §1.121, Applicant hereby submits the following marked-up copy of the revisions made to the claims by the Amendment submitted in response to the Office Action mailed March 5, 2001.

IN THE SPECIFICATION

5 The following Abstract has been added:

ABSTRACT

A narrowband video codec for generating an output stream of control, data, and error

correction bits includes means for framing the output, control and data bits into a series of sequential frames of bytes for transmission over an RF link of a controlled frequency. Each frame includes an identical sequence of bytes. Each frame of bytes includes, in sequence, two control bytes, a plurality of sequential sets of data bytes, and a plurality of error correction bytes. Each set of data bytes includes a sequence of at least one audio byte and a plurality of video bytes. At least one video byte is between each sequential audio byte. Each set of data bytes has its audio and video bytes in the same order as each other set of data bytes.

Please note, a copy of the above Abstract is attached hereto on a separate sheet of paper as requested by the Examiner.

IN THE CLAIMS

Claim 1 has been amended as follows:

1. (*Amended*) A narrowband video codec for generating an output stream of control, data, and error correction bits, said narrowband codec comprising:

means for framing the output, control and data bits into a series of sequential frames of bytes for transmission over an rf link of a controlled frequency wherein each frame comprises an identical sequence of bytes;

each frame comprising, in sequence;

two control bytes;

a plurality of sequential sets of data bytes, each set of data bytes comprising a sequence of at least one audio byte and a plurality of video bytes, at least one of said plurality of

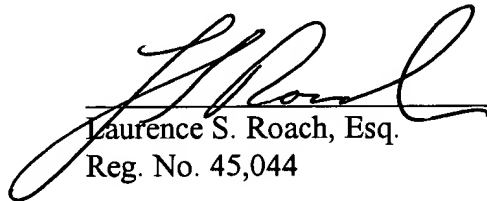
10 video bytes between each sequential audio byte, each set of data bytes having its audio and video bytes in the same order as each other set of data bytes; and

a plurality of error correction bytes.

The Examiner is invited to telephone the undersigned in regard to this Amendment and the above identified application.

Respectfully submitted,

5-JUNE-01
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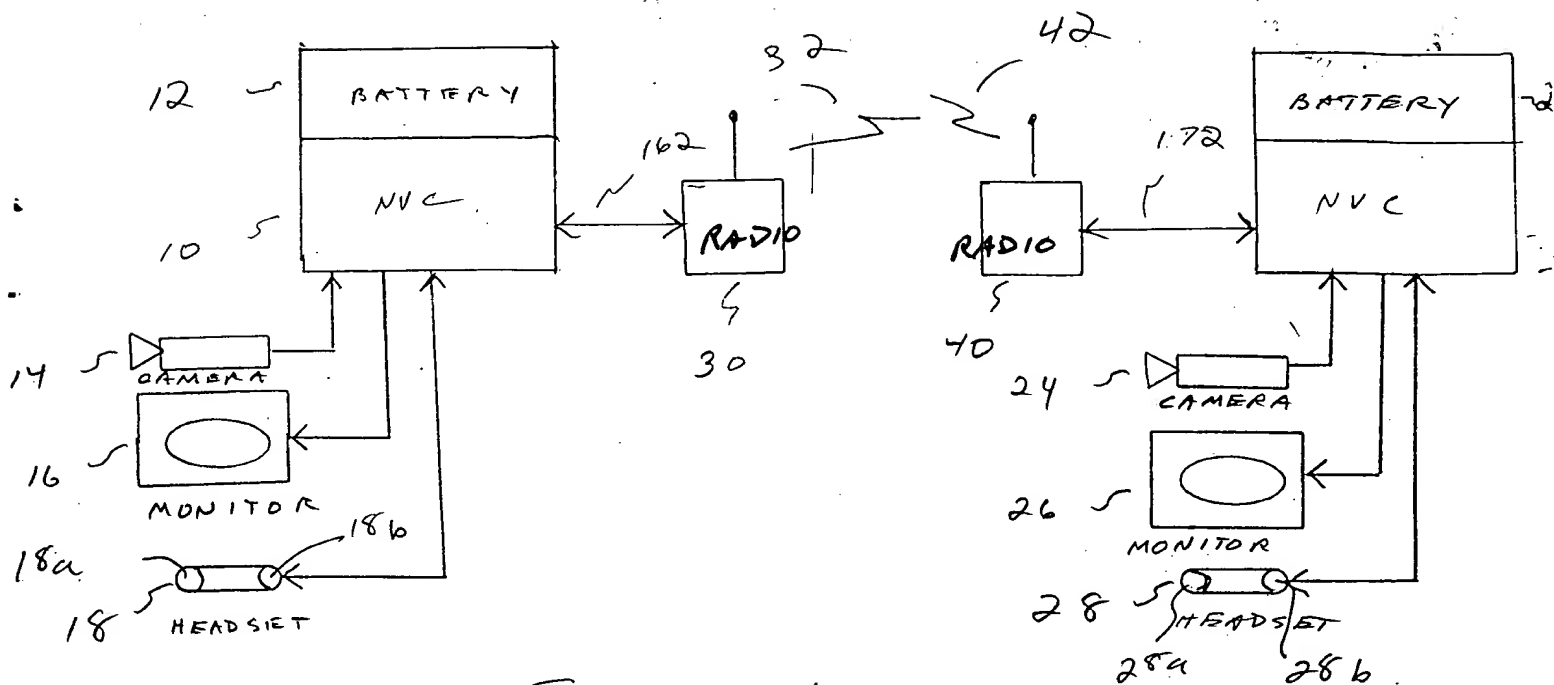


FIGURE 1

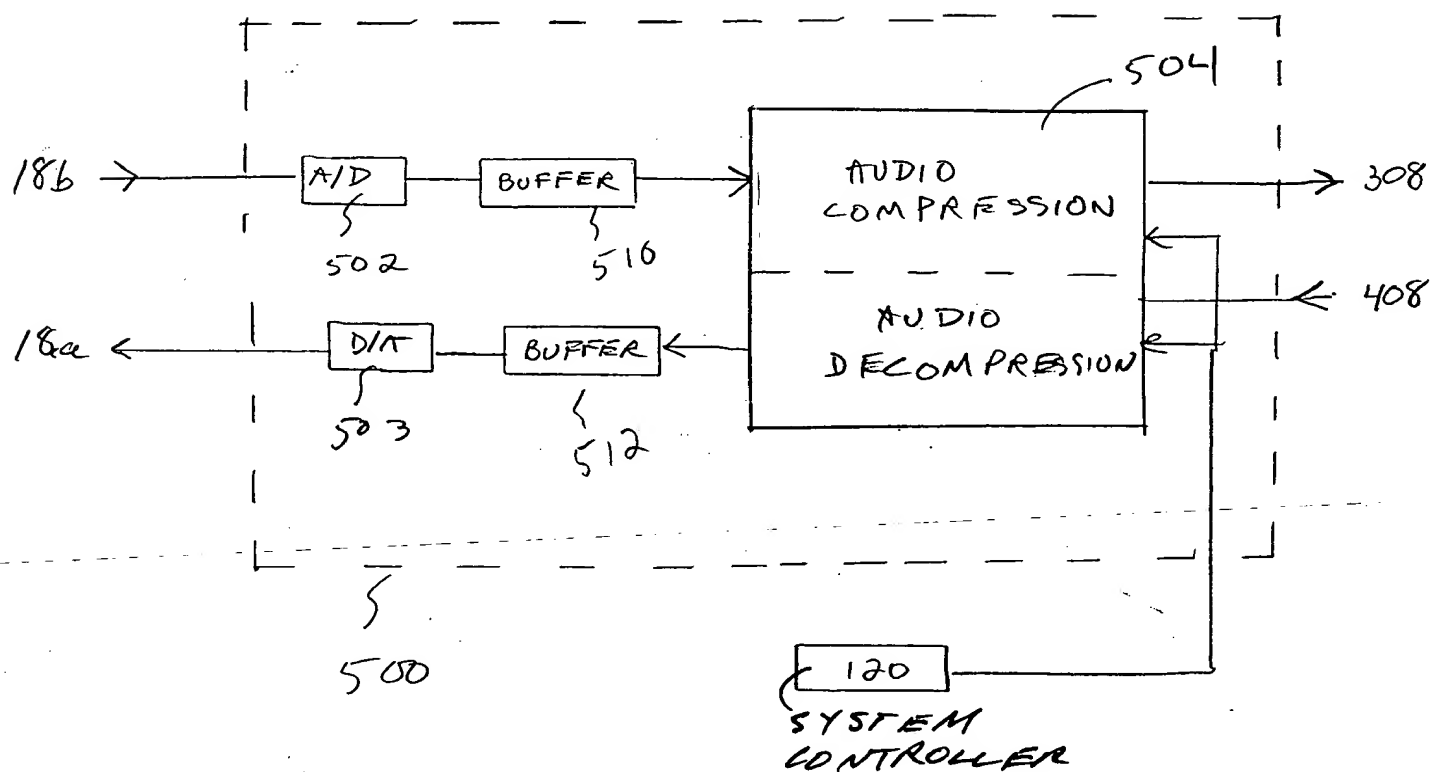


FIGURE 3C

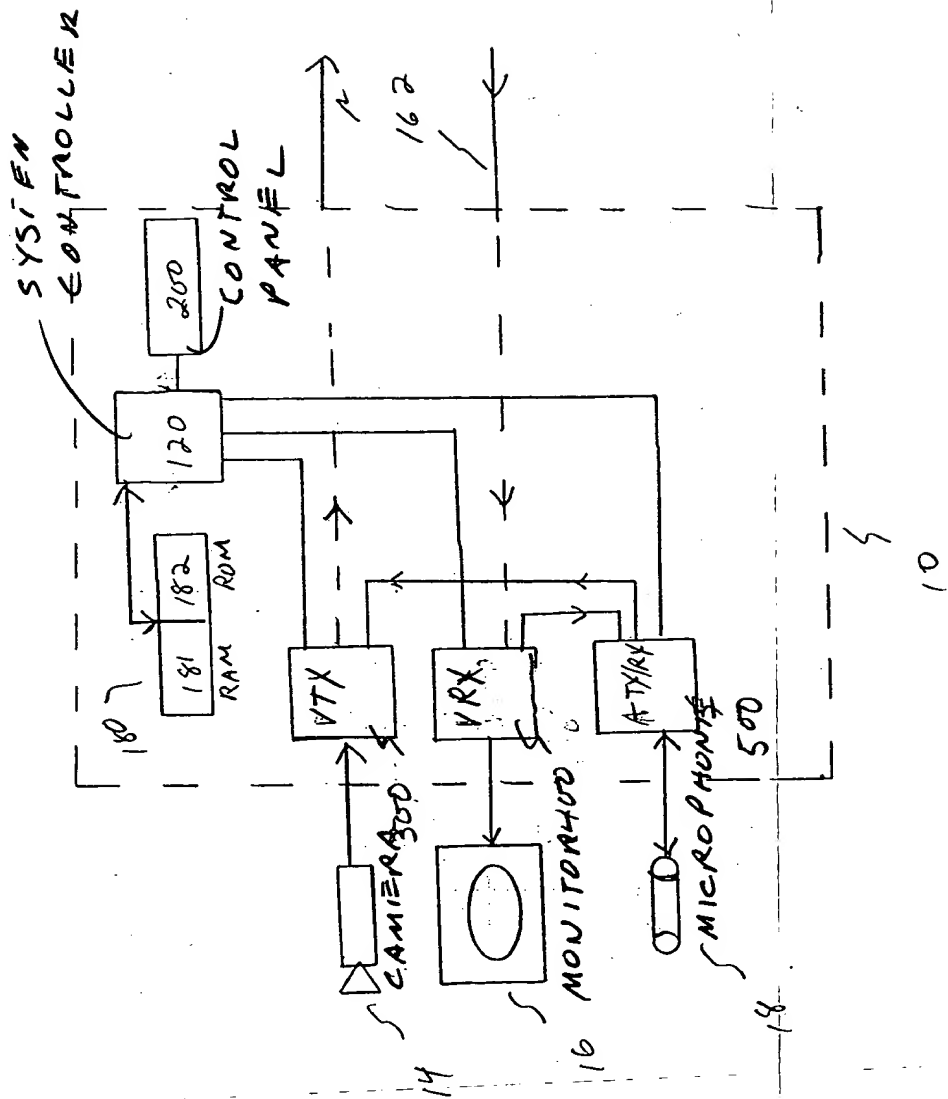


FIGURE 2